RESEARCH REPORT

Medical students' impressions and satisfactions from medical professional skill education lessons

SHORT TİTLE: CPR Manikin Education

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ABSTRACT

Background: To help us understand the medical students' reflections about professional skill educations we conducted a study on medical students' conceptions of selected medical phenomena, cardiopulmonary resuscitation, CPR.

Methods: The study was conducted in January 2008, using a sample consisting of medical students from one of the universities in Turkey (n=31). After cardiopulmonary resuscitation education with manikins, students were asked to filled out a questionnaire consisting of twelve Likert scale questions. Statistical analysis were done by using Somers' d correlation coefficient.

Results: When we made correlation between satisfied participants and the answers to the questions; satisfied participants stated that their vision regarding this lesson was changed (p=0.003), time was enough (p=0.003), their attitude about necessity of CPR education was changed (p=0.004), they have learned everything they need about this subject (p=0.004), their expectations are countered (p=0.008), they think they are supported by the educator (p=0.033), they have wanted to know more about this subject (p=0.025), this session helped them to realize what they know (p=0.000), and they believe about future modifications on their approaches (p=0.010).

Conclusion: Professional Medical Skills Laboratory in an important part of undergraduate medical education. Studies in these areas will add positive dynamic to medical education systems.

Key words: Professional skills, undergraduate student, medical education, education manikin

Introduction

Gaining of medical clinical skills by undergraduate students can be problematic.Simulation using computerized manikins may be an effective and ethical solution for this problem(1). Current trends in medical education emphasize the importance of professional skill educations where practices make explicit connections to real patients. Increasing concerns about patient safety have focused attention on the methods used to train and prepare doctors for clinical practice. Simulation is used as a central training tool in contemporary advanced life support teaching. Simulation provides a learning opportunity for controlled clinical practice without putting patients or others at risk(2). These approaches essentially point out that medical education occurs best when content is presented as a realistic way. Unfortunately, this is not possible because of the limitations of classical teaching methods. Nobody would suggest that medical students should be directly exposed to the real patients by classical methods. The use of professional skill education manikins as a pedagogical tool therefore seems logical, since it allows the students' imagination and create a virtual learning environment that is safe and practical, yet still engaging and authentic. At the same time, this method allows students to feel themselves more qualified and self-confidence by allowing them to repeat skills many times on manikins(3).

This approach has become ever more tenable in recent decades because professional skill education manikins have become more scientifically diverse and sophisticated, thus creating a wide range of potential teaching scenarios to draw on. Consequently; professional skill educations and laboratories become an important compotent of medical education all over the world(4,5).

A number of researchers have investigated the various uses and influences of professional skill education manikins in both the classroom and informal settings(6,7,8,9,10). İn the study

that is conducted by Remmen and at all, it is declared that classical medical education methods are not sufficient to teach students basic medical clinic skills and the importance of professional skills laboratories are mentioned clearly(11). Again in Ledinghams' study, significance of beginning these educations in the first year of medical education is indicated(12).

To help us understand the medical students' reflections about professional skill educations we conducted a study on medical students' conceptions of selected medical phenomena, cardiopulmonary resuscitation, CPR. We also attempted to explore the possibility that, in addition to their role as educational vehicles, education manikins may be used as evaluative and investigative tools that can help to reveal students' special interests.

Methods

The study was conducted in January 2008, using a sample consisting of medical students from one of the universities in Turkey, Suleyman Demırel Unıversıty (n=31). The sample was primary chosen by coincidence sampling method. After cardiopulmonary resuscitation education with highly developed manikins, students were asked to filled out a questionnaire consisting of twelve Likert scale questions. İt is known that student ratings are one of the most frequent methods used to evaluate teaching, by this way, we tried to take students' ratings about this education method(13). The questions were designed to examine students' impressions from this professional skill education lesson as well as analyze their satisfactions. Answers are searched for the questions such as "Are you satisfied from this lesson ?", "What do you think about time using in the session ? ", "During education, could you feel yourself comfortable in a short time ?", "Are you hopefull from this teaching method ?", "Do educators give significance to your thoughts ?", "Did anything change in your view about CPR ?", "Could you feel educators support ?", "Did the lesson help you realize what you

know ?", "Did the lesson counter your expectations ?", "Are you thinking to make some modifications on your approaches ?", "What do you think about education necessity ?" and "Do you want to know more about this subject ?".

We looked for correlations between students' answers to questions. Since there are relatively few studies in this area, we used an exploratory approach in data analysis. Datas are tabulated by SPSS software. Statistical analysis were done by using Somers' d correlation coefficient. Based on analysis, significant correlations are noted.

Results

First question was about the satisfaction of students. Students whom satisfied from this session said that their vision about cardiopulmonary resuscitation changed (d=0.493, p=0.004). The same group declared that time for the education period was quite enough to understand the subject (d=0.404, p=0.003). Again, pleased students' thoughts about the necessity of CPR education, changed by this professional skill lesson (d=0.429, p=0.011). Satisfied students pronounced that they want to know more about that manner. (d=0.409, p=0.025).

Second question was directed about time using. Students who affirm the time using as absolutely enough; declared that their expectations from the lesson are countered (d=0.320, p=0.038), and session changed their expectations about CPR (d=0.483, p=0.001).

Only correlation, we could find for the third question, 'During education, could you feel yourself comfortable in a short time ?' was between their expectations that are countered during lesson (d=0.311, p=0.022).

İn the fourth question, we tried to investigate the hopefulness of students from this education method. Students that are hopeful from manikin educations uttered changes about their views (d=0.423, p=0.008). They thought that they had enough time to understand the

lesson (d=0.467, p=0.003) and they could feel themselves comfortable in a short time (d=0.346, p =0.061).

İn the questionnare, we asked ‘Did educators give significance to your thoughts ?’ as fifth question. Students who answered this question ‘certainly’, at the same time expressed changes about their views (d=0.255, p=0.023).

İn the sixth question; students that are mentioned changes in their views about this subject by the help of manikin education; had enough time to understand the lesson (d=0.518, p=0.001), made modifications on their approaches to CPR patients (d=0.585, p=0.000), changed their thoughts about their educational necessities (d=0.586, p=0.002), could find everything they need about this subject during lesson (d=0.493, p=0.004) and their expectations are countered (d=0.423, p=0.008).

On the next question; we wanted to know, they felt their educators’ support or not during lesson. There were correlations between the students’ positive answers and modification on approaches (d=0.401, p=0.033) and realize insufficiencies (d=0.315, p=0.047).

We asked students ‘Did the lesson help you to realize what you know ?’ as the eight question. Students who accepted this as true; believe that this lesson will make modification on their approaches for CPR patients (d=0.343, p=0.025) and will change their views (d=0.561, p=0.000) about this subject.

Question nine was directly related with students’ expectations. Students, consider that their expectations are countered; fell educator support (d=0.315, p=0.047) and realize what they know (d=0.424, p=0.00).

Every education, of course, make some modifications on students’ approaches. About this medical professional skill CPR education, students who think that they will make some modifications on their approaches to CPR patients; want to know more about this subject

(d=0.391, p=0.005), changed their view in this manner (d=0.585, p=0.000), think that they are supported (d=0.401, p=0.033) and they realized what they know (d=0.372, p=0.043).

When we look at the students' thoughts about education necessity; students who accept they need more education, suspect some changes in their views about this subject (d=0.529, p=0.000). This group considered that time using during lesson was quite enough (d=0.422, p=0.013) and helped them to realize what they know (d=0.631, p=0.000) and they believe about future modifications on their approaches (d=0.445, p=0.010).

About the last question; 'Do you want to know more about this subject ?' students who answer this question positively think that they will have modifications on their approaches about these patients (d=0.391, p=0.005).

Discussion

İn the study, conducted by Russo and at all, that resembles to our study, they investigated self-reported changes in attitude and behavior after attending a simulation-aided airway management course. They reported that; attendance at a simulator-aided airway management course has a significant impact on self-reported accuracy and confidence in evaluation of airways, use of alternative airway devices, and changes in the practitioner's clinical practice toward difficult airway situations(14).

Our results showed that our students are ready to engage in more practical activities such as professional skills laboratory. Practices in these places provided them the flexibility to learn by themselves. Students support the use of medical manikins in their lessons as it encouraged their views. As a result, we can say that, skills education seems to offer students a superior preparation for their career as well as influencing students' long-term learning abilities.

Professional Skill Laboratories are one of the most important compotents of undergraduate medical education. İn Suleyman Demirel University Faculty of Medicine, revisions are begun before 2 years ago on this discipline and still growing up paralel to the developments all over the universities.

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